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Villeneuve

в

Zoller Alain

## AIR TURQUOISE SA certified by



## Flight test report: EN

| Manufacturer   | ADVANCE Thun AG                               | Certification number |  |  |  |
|----------------|---|----------------------|--|--|--|
| Address        | Uttigenstrasse 87<br>3600 Thun<br>Switzerland | Date of flight test  |  |  |  |
| Representative | Kari Eisenhut                                 | Place of test        |  |  |  |
| Glider model   | Epsilon 7 28                                  | Classification       |  |  |  |
| Trimmer        | no  |                      |  |  |  |
|                |   |                      |  |  |  |
|                | Test pilot Thurnheer Claude                   |                      |  |  |  |

Harness Niviuk Gliders - Hamak 2 M Gin Gliders - Gingo 2 L Total weight in flight (kg) 110 125 1. Inflation/Take-off Α **Rising behaviour** Smooth, easy and constant rising A Smooth, easy and constant rising А Special take off technique required No А No А 2. Landing Α Special landing technique required No A No А 3. Speed in straight flight Α Trim speed more than 30 km/h Yes А Yes Α Speed range using the controls larger than 10 km/h Yes Yes Α А Minimum speed Less than 25 km/h Α Less than 25 km/h Α 4. Control movement Α Max. weight in flight up to 80 kg Symmetric control pressure / travel not available 0 not available 0 Max. weight in flight 80 kg to 100 kg Symmetric control pressure / travel Increasing / greater than 60 cm 0 А not available Max. weight in flight greater than 100 kg Symmetric control pressure / travel not available 0 Increasing / greater than 65 cm А 5. Pitch stability exiting accelerated flight Α Dive forward angle on exit Dive forward less than 30° А Dive forward less than 30° А Collapse occurs No A No Α 6. Pitch stability operating controls during accelerated Α flight Collapse occurs No А No Α 7. Roll stability and damping Α Oscillations Reducing A Reducing A 8. Stability in gentle spirals Α Tendency to return to straight flight Spontaneous exit Spontaneous exit А А 9. Behaviour in a steeply banked turn в More than 14 m/s В Sink rate after two turns More than 14 m/s в в 10. Symmetric front collapse Entry Rocking back less than 45° А Rocking back less than 45° А Spontaneous in 3 s to 5 s В Spontaneous in less than 3 s Recovery Α Dive forward angle on exit / Change of course Dive forward 0° to 30° / Keeping А Dive forward 0° to 30° / Keeping Α course course Cascade occurs No A No Α With accelerator Entry А Rocking back less than 45° А Rocking back less than 45° Recovery Spontaneous in 3 s to 5 s В Spontaneous in less than 3 s А

| Dive forward angle on exit / Change of course                            | Dive forward 0° to 30° / Keeping course                         | A | Dive forward 0° to 30° / Keeping course          | A |
|--|---|---|--|---|
| Cascade occurs   | No  | А | No   | А |
| 11. Exiting deep stall (parachutal stall)                                | Α   |   |  |   |
| Deep stall achieved  | Yes   | А | Yes  | А |
| Recovery   | Spontaneous in less than 3 s                                    | А | Spontaneous in less than 3 s                     | А |
| Dive forward angle on exit   | Dive forward 0° to 30°  | А | Dive forward 0° to 30°                           | А |
| Change of course   | Changing course less than 45°                                   | А | Changing course less than 45°                    | А |
| Cascade occurs   | No  | А | No   | А |
| 12. High angle of attack recovery  | Α   |   |  |   |
| Recovery   | Spontaneous in less than 3 s                                    | А | Spontaneous in less than 3 s                     | А |
| Cascade occurs   | No  | А | No   | А |
| 13. Recovery from a developed full stall                                 | Α   |   |  |   |
| Dive forward angle on exit   | Dive forward 0° to 30°  | А | Dive forward 0° to 30°                           | А |
| Collapse   | No collapse   | А | No collapse                                      | А |
| Cascade occurs (other than collapses)                                    | No  | А | No   | А |
| Rocking back   | Less than 45°   | А | Less than 45°                                    | А |
| Line tension   | Most lines tight  | А | Most lines tight                                 | А |
| 14. Asymmetric collapse  | В   |   |  |   |
| With 50% collapse  |   |   |  |   |
| Change of course until re-inflation / Maximum dive forward or roll angle | Less than 90° / Dive or roll angle 0° to 15° $$                 | A | Less than 90° / Dive or roll angle 0° to 15° $$  | A |
| Re-inflation behaviour   | Spontaneous re-inflation  | А | Spontaneous re-inflation                         | А |
| Total change of course   | Less than 360°  | А | Less than 360°                                   | А |
| Collapse on the opposite side occurs                                     | No  | А | No   | А |
| Twist occurs   | No  | А | No   | А |
| Cascade occurs   | No  | А | No   | А |
| With 75% collapse  |   |   |  |   |
| Change of course until re-inflation / Maximum dive forward or roll angle | 90° to 180° / Dive or roll angle<br>15° to 45°                  | В | 90° to 180° / Dive or roll angle 15° to 45°      | В |
| Re-inflation behaviour   | Spontaneous re-inflation  | А | Spontaneous re-inflation                         | А |
| Total change of course   | Less than 360°  | А | Less than 360°                                   | А |
| Collapse on the opposite side occurs                                     | No  | А | No   | А |
| Twist occurs   | No  | А | No   | А |
| Cascade occurs   | No  | А | No   | А |
| With 50% collapse and accelerator  |   |   |  |   |
| Change of course until re-inflation / Maximum dive forward or roll angle | Less than 90° / Dive or roll angle $15^{\circ}$ to $45^{\circ}$ | A | Less than 90° / Dive or roll angle 15° to 45° $$ | A |
| Re-inflation behaviour   | Spontaneous re-inflation  | А | Spontaneous re-inflation                         | А |
| Total change of course   | Less than 360°  | А | Less than 360°                                   | А |
| Collapse on the opposite side occurs                                     | No  | А | No   | А |
| Twist occurs   | No  | А | No   | А |
| Cascade occurs   | No  | А | No   | А |
| With 75% collapse and accelerator  |   |   |  |   |
| Change of course until re-inflation / Maximum dive forward or roll angle | 90° to 180° / Dive or roll angle<br>15° to 45°                  | В | 90° to 180° / Dive or roll angle 15° to 45°      | В |
| Re-inflation behaviour   | Spontaneous re-inflation  | А | Spontaneous re-inflation                         | А |
| Total change of course   | Less than 360°  | А | Less than 360°                                   | А |
| Collapse on the opposite side occurs                                     | No  | А | No   | А |
| Twist occurs   | No  | А | No   | А |
| Cascade occurs   | No  | А | No   | А |
| 15. Directional control with a maintained asymmetric collapse            | A   |   |  |   |
| Able to keep course  | Yes   | А | Yes  | А |
| 180° turn away from the collapsed side possible in 10 s                  | Yes   | А | Yes  | А |
| Amount of control range between turn and stall or spin                   | More than 50 % of the<br>symmetric control travel               | A | More than 50 % of the symmetric control travel   | A |

| A A   Spin occurs No A No A   Spin occurs A Stops spinning in less than 90° A Stops spinning in less than 90° A   Spin rotation angle after release Stops spinning in less than 90° A Stops spinning in less than 90° A   Spin rotation angle after release No A No A   Change of course before release Changing course less than 45° A Changing course less than 45° A   Behaviour before release Remains stable with straight span A Remains stable with straight span A   Recovery Spontaneous in less than 3 s A Dive forward °t to 30° A Dive forward °t to 30° A   Cascade occurs No A No A No A   Cascade occurs No A No A A   Cascade occurs No A No A A   Cascade occurs No A No A No   Cascade occurs No A No A A   Cascade occurs No A Stable flight A Stable flight A   Cascade occurs No A Stable flight   | 16. Trim speed spin tendency   | Α                                       |   |                                   |   |
|---|--|---|---|-----------------------------------|---|
| Spin occursNoANoANoA18. Recovery from a developed spinASpin rotation angle after releaseStops spinning in less than 90°AStops spinning in less than 90°ASpin rotation angle after releaseNoANoAChange of course before releaseChanging course less than 45°ARemains stable with straight spanABehaviour before releaseSpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ADive forward angle on exitDive forward 0° to 30°ADete forward 0° to 30°ABehaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sADete forward 0° to 30°ADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ABehaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sADive forward 0° to 30°ADive forward 0° to 30°ADive forward 0° to 30°ADive forward 0° to 30°A21. Big ears in accelerated flightAStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward 0° to 30°ADive forward 0° to 30°ADive forward 0° to 30°A21. Big ears in a  | Spin occurs  | No                                      | А | No                                | А |
| A   A     Spin rotation angle after release   Stops spinning in less than 90°   A   Stops spinning in less than 90°   A     Spin rotation angle after release   No   A   No   A     DB -B-line stall   A   Changing course less than 45°   A   Remains stable with straight span   A     Behaviour before release   Spontaneous in less than 3 s   A   Spontaneous in less than 3 s   A   Spontaneous in less than 3 s   A     Behaviour before release   No   A   No   A   Remains stable with straight span   A     Recovery   Spontaneous in less than 3 s   A   Spontaneous in less than 3 s   A   Dive forward 0° to 30°   A   Spontaneous in less than 3 s   | 17. Low speed spin tendency  | Α                                       |   |                                   |   |
| Spin rotation angle after releaseStops spinning in less than 90°AStops spinning in less than 90°ACascade occursNoANoA19. B-line stallAAChange of course before releaseChanging course less than 45°AChanging course less than 45°ABehaviour before releaseRemains stable with straight<br>spanARemains stable with straight<br>spanARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ANoA20. Big earsAEEEEntry procedureDedicated controlsASpontaneous in less than 3 sABehaviour during big earsStable flightASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ABehaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDedicated controlsADive forward 0° to 30°ADive forward uning big earsStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward 0° to 30°ADive forward 0° to 30°ADive   | Spin occurs  | No                                      | А | No                                | А |
| Cascade occursNoANoA19. B-line stallAChange of course before releaseChanging oourse less than 45"ABehaviour before releaseRemains stable with straight<br>spanARemains stable with straight<br>spanARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0" to 30"ANoA20. Big earsACascade cocursADeclicated controlsABehaviour during big earsADeclicated controlsADeclicated controlsABehaviour during big earsStable flightAStable flightABehaviour during big earsStable flightAStable flightADive forward on to 30°ADive forward 0" to 30"ADive forward 0" to 30"ADive forward angle on exitDive forward 0" to 30"ADive forward 0" to 30"AABehaviour during big earsStable flightAStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward 0" to 30"ADive forward big earsStable flightAStable flightAAABehaviour during big earsStable flightAStable flightAADive forward big earsStable flightASpontaneous in less than 3 sASpontaneous in less than 3 sADive for  | 18. Recovery from a developed spin   | А                                       |   |                                   |   |
| 19. B-line stall   A   A   A   A     Change of course before release   Changing course less than 45°   A   Changing course less than 45°   A     Behaviour before release   Remains stable with straight span   A   Remains stable with straight span   A     Recovery   Spontaneous in less than 3 s   A   Spontaneous in less than 3 s   A   Spontaneous in less than 3 s   A     20. Big cars   A   Dive forward 0° to 30°   A   No   A     20. Big cars   A   Entry procedure   Dedicated controls   A   Dedicated controls   A     Behaviour during big ears   Stable flight   A   Spontaneous in less than 3 s   A     Dive forward angle on exit   Dive forward 0° to 30°   A   Dive forward 0° to 30°   A     Behaviour during big ears   Stable flight   A   Spontaneous in less than 3 s   A     Dive forward angle on exit   Decicated controls   A   Decicated controls   A     Behaviour during big ears   Stable flight   A   Stable flight   A     Recovery   Spontaneous in less than 3 s   A   Spontaneous exit   A  | Spin rotation angle after release  | Stops spinning in less than 90 $^\circ$ | А | Stops spinning in less than 90°   | А |
| Change of course before releaseChanging course less than 45°<br>Remains stable with straight<br>spanAChanging course less than 45°<br>AARemains stable with straight<br>spanARecoverySpontaneous in less than 3 s<br>Dive forward of to 30°ADive forward 0° to 30°<br>AANoACascade occursNoANoANoA20. Big earsADedicated controlsADedicated controlsABehaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ABehaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°A21. Big ears in accelerated flightAStable flightAStable flightABehaviour during big earsStable flightAStable flightAStable flightADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ADive forward 0° to 30°ADive forward gig earsStable flightAStable flightAStable flightA22. Behaviour exiting a steep spiralASpontaneous exitAA23. Atternet term or s  | Cascade occurs   | No                                      | А | No                                | А |
| Behaviour before releaseRemains stable with straight<br>spanARemains stable with straight<br>spanARemains stable with straight spanARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ANoA20. Big earsAADedicated controlsANoAEntry procedureDedicated controlsAStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ADive forward 0° to 30°ADive forward angle on exitDedicated controlsAStable flightAStable flightABehaviour during big earsStable flightAStable flightAStable flightABehaviour during big earsStable flightAStable flightAStable flightABehaviour exiting a steep spiralACStable flightAStable flightAStable flightAStable flightAStable flightAStable flightADive forward 0° to 30°ADive forward 0° to 30°ADive forward 0° to 30°ADive forward angle on exitBecaviour exiting a steep spiralAStable flight  | 19. B-line stall   | Α                                       |   |                                   |   |
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| Dive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ACascade occursNoANoA20. Big ersAEntry procedureDedicated controlsADedicated controlsAEntry procedureDedicated controlsAStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward 0° to 30°ADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°AA21. Big ers in accelerated flightAEntry procedureDedicated controlsADedicated controlsA21. Big ers in accelerated flightAEntry procedureSpontaneous in less than 3 sADive forward 0° to 30°A21. Big ers in accelerated flightAStable flightAStable flightARecoverySpontaneous in less than 3 sADive forward 0° to 30°ADive forward 0° to 30°ABehaviour during big earsStable flightAStable flightAStable flightARecoverySpontaneous in less than 3 sADive forward 0° to 30°ADive forward 0° to 30°ADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°AARecoverySpontaneous in less than 3 sADive forward 0° to 30°AARecoverySpontaneous in less than 3 sADive forward 0° to 30°A  | Behaviour before release   |   | A | Remains stable with straight span | A |
| Cascade occursNoANoA20. Big earsA20. Big earsAEntry procedureDedicated controlsADedicated controlsABehaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°A21. Big ears in accelerated flightAEEEntry procedureDedicated controlsADedicated controlsABehaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ABehaviour immediately after releasing the accelerator whileStable flightAStable flightABehaviour immediately after releasing the accelerator whileSpontaneous exitADive forward 0° to 30°A22. Behaviour exiting a steep spiralALess than 720°, spontaneous exitALess than 720°, spontaneous recovery recoveryASink rate when evaluating spiral stability [m/s]17191923. Atternative means of directional controlAALess than 720°, spontaneousNoANoAAStabil or spin occursNoANoAA24. Any other flightNoN  | Recovery   | Spontaneous in less than 3 s            | А | Spontaneous in less than 3 s      | А |
| AAEntry procedureDedicated controlsABehaviour during big earsStable flightARecoverySpontaneous in less than 3 sADive forward one xitDive forward 0° to 30°ADive forward angle on exitDedicated controlsADive forward one xitDedicated controlsADive forward one xitDedicated controlsADive forward one xitDedicated controlsABehaviour during big earsStable flightABehaviour during big earsStable flightABehaviour during big earsStable flightABehaviour during big earsStable flightABehaviour immediately after releasing the accelerator whileDive forward 0° to 30°ADive forward one exitBehaviour exiting a steep spiralAStable flightAStable flightATurn angle to recover normal flightSpontaneous exitAStalt rate when evaluating spiral stability [m/s]171923. Alternative means of directional controlANoA24. Any other flight procedure and/or configuration<br>described in the user's manualNoA24. Any other flight procedure and/or configuration<br>described in the user's manual0not available0Procedure works as describednot available0not available0Procedure works as describednot available0not available0Procedure works as describednot available<  | Dive forward angle on exit   | Dive forward 0° to 30°                  | А | Dive forward 0° to 30°            | А |
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| Behaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°A21. Big ears in accelerated flightAEEEntry procedureDedicated controlsADedicated controlsABehaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ABehaviour unmediately after releasing the accelerator whileStable flightAStable flightA22. Behaviour exiting a steep spiralAEess than 720°, spontaneous exitASpontaneous exitATurn angle to recover normal flightLess than 720°, spontaneous recoveryIIII23. Alternative means of directional controlAYesANoA24. Any other flight procedure and/or configurationOIIII25. Any other flight procedure and/or configurationOIIII26. Comments of test pilotnot available0IIII27. Grade coursAYesAIIII   | 20. Big ears   | Α                                       |   |                                   |   |
| RecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°A21. Big ears in accelerated flightAEntry procedureDedicated controlsADedicated controlsABehaviour during big earsStable flightAStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward 0° to 30°ADive forward angle on exitStable flightAStable flightAStable flightABehaviour immediately after releasing the accelerator whileStable flightAStable flightABehaviour immediately after releasing the accelerator whileStable flightAStable flightATendency to return to straight flightSpontaneous exitASpontaneous exitATurn angle to recover normal flightLess than 720°, spontaneous exitALess than 720°, spontaneous exitAStall or spin occursNoANoANoA23. Alternative means of directional controlAYesANoA24. Any other flight procedure and/or configuration<br>described in the user's and accelerationNoANoAProcedure works as describednot available0not available0not available0Cascade occursnot available0not available0not available <td< td=""><td>Entry procedure</td><td>Dedicated controls</td><td>Α</td><td>Dedicated controls</td><td>А</td></td<> | Entry procedure  | Dedicated controls                      | Α | Dedicated controls                | А |
| Dive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°A21. Big ears in accelerated flightAEntry procedureDedicated controlsABehaviour during big earsStable flightARecoverySpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ABehaviour immediately after releasing the accelerator whileDive forward 0° to 30°ABehaviour immediately after releasing the accelerator whileStable flightAStable flightAStable flightATendency to return to straight flightASpontaneous exitATurn angle to recover normal flightLess than 720°, spontaneous<br>recoveryALess than 720°, spontaneous<br>recoverySink rate when evaluating spiral stability [m/s]171923. Alternative means of directional controlANoAAtternative means of directional controlANoA24. Any other flight procedure and/or configuration<br>described in the user's manualOnot available0Procedure works as describednot available0not available0Procedure works as describednot available0not available0Cascade occursnot available0not available0Cascade occursnot available0not available0  | Behaviour during big ears  | Stable flight                           | Α | Stable flight                     | А |
| 21. Big ears in accelerated flightAEntry procedureDedicated controlsADedicated controlsABehaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ABehaviour immediately after releasing the accelerator while<br>maintaining big earsStable flightAStable flightA22. Behaviour exiting a steep spiral<br>Tendency to return to straight flightASpontaneous exitASpontaneous exitATurn angle to recover normal flightSpontaneous exitALess than 720°, spontaneous<br>recoveryALess than 720°, spontaneous<br>recoveryA23. Alternative means of directional control<br>described in the user's manualAYesAA24. Any other flight procedure and/or configuration<br>described in the user's manualOnot available0not available0Procedure works as describednot availablenot available0not available00Cascade occursnot available0not available0not available0Cascade occursnot available0not available0not available0  | Recovery   | Spontaneous in less than 3 s            | Α | Spontaneous in less than 3 s      | А |
| Entry procedureDedicated controlsADedicated controlsABehaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward on exitDive forward 0° to 30°ADive forward 0° to 30°ABehaviour immediately after releasing the accelerator whileStable flightAStable flightA22. Behaviour exiting a steep spiralAStable flightAStable flightATendency to return to straight flightSpontaneous exitASpontaneous exitATurn angle to recover normal flightLess than 720°, spontaneous<br>recoveryALess than 720°, spontaneous<br>recoveryA23. Alternative means of directional controlAYesA24. Any other flight procedure and/or configuration<br>described in the user's manualONoANo24. Any other flight procedure and/or configuration<br>described in the user's manualOnot availableOnot availableOProcedure works as describednot available0not availableOnot availableOCascade occursnot available0not availableOnot availableO25. Comments of test pllotCascade occursnot availableOnot availableO  | Dive forward angle on exit   | Dive forward 0° to 30°                  | Α | Dive forward 0° to 30°            | А |
| Behaviour during big earsStable flightAStable flightARecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward of to 30°Dive forward 0° to 30°ADive forward 0° to 30°ABehaviour immediately after releasing the accelerator while<br>maintaining big earsStable flightAStable flightA22. Behaviour exiting a steep spiralAFormation of the stable flightAStable flightATendency to return to straight flightSpontaneous exitASpontaneous exitATurn angle to recover normal flightLess than 720°, spontaneous<br>recoveryALess than 720°, spontaneous<br>recoveryASink rate when evaluating spiral stability [m/s]1719171923. Alternative means of directional controlAYesANoA24. Any other flight procedure and/or configuration<br>described in the user's manualOnot available0not available0Procedure works as describednot available0not available0not available0Cascade occursnot available0not available0not available0Cascade occursnot available0not available0not available0Cascade occursnot available0not available0not available0Cascade occursnot available0not available0not available0Cascade occurs <td>21. Big ears in accelerated flight</td> <td>А</td> <td></td> <td></td> <td></td>                                       | 21. Big ears in accelerated flight   | А                                       |   |                                   |   |
| RecoverySpontaneous in less than 3 sASpontaneous in less than 3 sADive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ABehaviour immediately after releasing the accelerator while<br>maintaining big earsStable flightAStable flightA22. Behaviour exiting a steep spiralAStable flightAStable flightATendency to return to straight flightSpontaneous exitASpontaneous exitAATurn angle to recover normal flightLess than 720°, spontaneous<br>recoveryALess than 720°, spontaneous<br>recoveryA23. Alternative means of directional controlAYesANoA24. Any other flight procedure and/or configuration<br>described in the user's manualOANoAProcedure works as describednot available0not available0ot available0Cascade occursnot available0not available0not available025. Comments of test pilotStable flightStable flightStable flightStable flightStable flight26. Comments of test pilotStable flightStable flightStable flightStable flightStable flight27. Alternative means of directional controlAStable flightStable flightStable flightStable flight27. Alternative means of directional controlStable flightStable flightStable flightStable flightStable flight28. Co  | Entry procedure  | Dedicated controls                      | Α | Dedicated controls                | А |
| Dive forward angle on exitDive forward 0° to 30°ADive forward 0° to 30°ABehaviour immediately after releasing the accelerator while<br>maintaining big earsStable flightAStable flightA22. Behaviour exiting a steep spiralAAStable flightATendency to return to straight flightSpontaneous exitASpontaneous exitATurn angle to recover normal flightLess than 720°, spontaneous<br>recoveryALess than 720°, spontaneous<br>recoveryA23. Alternative means of directional controlAYesAYesA24. Any other flight procedure and/or configuration<br>described in the user's manualOnot available0not available0Procedure works as describednot available0not available0not available0025. Comments of test pilotStable flightNoNoNoNoNoNo25. Comments of test pilotStable flightNoNoNoNoNo26. Comments of test pilotStable flightNoNoNoNoNo27. Comments of test pilotStable flightNoNoNoNoNoNo28. Comments of test pilotStable flightNoNoNoNoNoNoNo29. Stall or spin occursNoNoNoNoNoNoNoNoNoNoNoNoNoNoNoNoNoNoNo <td< td=""><td>Behaviour during big ears</td><td>Stable flight</td><td>Α</td><td>Stable flight</td><td>А</td></td<>  | Behaviour during big ears  | Stable flight                           | Α | Stable flight                     | А |
| Behaviour immediately after releasing the accelerator while<br>maintaining big earsStable flightAStable flightA22. Behaviour exiting a steep spiral<br>Tendency to return to straight flightASpontaneous exitASpontaneous exitATurn angle to recover normal flightSpontaneous exitALess than 720°, spontaneous<br>recoveryALess than 720°, spontaneous<br>recoveryA23. Alternative means of directional controlAYesA180° turn achievable in 20 sYesAYesAStall or spin occursNoANoA24. Any other flight procedure and/or configuration<br>described in the user's manualOnot available0Procedure works as describednot available0not available0Cascade occursnot available0not available025. Comments of test pilotState spin occurs0not available0  | Recovery   | Spontaneous in less than 3 s            | Α | Spontaneous in less than 3 s      | А |
| maintaining big ears   A     22. Behaviour exiting a steep spiral   A     Tendency to return to straight flight   Spontaneous exit   A     Turn angle to recover normal flight   Less than 720°, spontaneous at less than 720°, spontaneous at recovery   A     Sink rate when evaluating spiral stability [m/s]   17   19     23. Alternative means of directional control   A   Yes   A     180° turn achievable in 20 s   Yes   A   Yes   A     Stall or spin occurs   No   A   No   A     24. Any other flight procedure and/or configuration described in the user's manual   not available   0   not available   0     Procedure works as described   not available   0   not available   0   0     Procedure suitable for novice pilots   not available   0   not available   0   0     Cascade occurs   not available   0   not available   0   0   0     25. Comments of test pilot   Stati or spin occurs  | Dive forward angle on exit   | Dive forward 0° to 30°                  | Α | Dive forward 0° to 30°            | А |
| Tendency to return to straight flightSpontaneous exitASpontaneous exitATurn angle to recover normal flightLess than 720°, spontaneous<br>recoveryALess than 720°, spontaneous<br>recoveryASink rate when evaluating spiral stability [m/s]171923. Alternative means of directional controlAYesA180° turn achievable in 20 sYesAYesAStall or spin occursNoANoA24. Any other flight procedure and/or configuration<br>described in the user's manualOInot available0Procedure works as describednot available0not available0Procedure suitable for novice pilotsnot available0not available0Cascade occursnot available0not available025. Comments of test pilotItem serverItem serverItem server   | Behaviour immediately after releasing the accelerator while maintaining big ears   | Stable flight                           | A | Stable flight                     | А |
| Turn angle to recover normal flightLess than 720°, spontaneous<br>recoveryALess than 720°, spontaneous<br>recoveryASink rate when evaluating spiral stability [m/s]171923. Alternative means of directional controlA19A180° turn achievable in 20 sYesAYesAStall or spin occursNoANoA24. Any other flight procedure and/or configuration<br>described in the user's manualOnot available0Procedure works as describednot available0not available0Procedure suitable for novice pilotsnot available0not available0Cascade occurs0not available0not available025. Comments of test pilot0not available0not available0   | 22. Behaviour exiting a steep spiral   | Α                                       |   |                                   |   |
| recoveryrecoveryrecoverySink rate when evaluating spiral stability [m/s]171923. Alternative means of directional controlA23. Alternative means of directional controlA180° turn achievable in 20 sYesAStall or spin occursNoA24. Any other flight procedure and/or configuration<br>described in the user's manualOProcedure works as describednot available0Procedure suitable for novice pilotsnot available0Cascade occurs0not available025. Comments of test pilot  | Tendency to return to straight flight  | Spontaneous exit                        | Α | Spontaneous exit                  | А |
| 23. Alternative means of directional control   A     180° turn achievable in 20 s   Yes   A   Yes   A     Stall or spin occurs   No   A   No   A     24. Any other flight procedure and/or configuration described in the user's manual   0   O   Procedure works as described   not available   0   not available   0     Procedure suitable for novice pilots   not available   0   not available   0   0     Cascade occurs   not available   0   not available   0   0   0     25. Comments of test pilot   State pilot   Sta   | Turn angle to recover normal flight  |   | A |                                   | A |
| 180° turn achievable in 20 sYesAYesAStall or spin occursNoANoA24. Any other flight procedure and/or configuration<br>described in the user's manual0Stall or spin occursAProcedure works as describednot available0not available0Procedure suitable for novice pilotsnot available0not available0Cascade occursnot available0not available025. Comments of test pilotNoNoNoNo   | Sink rate when evaluating spiral stability [m/s]                                   | 17                                      |   | 19                                |   |
| Stall or spin occursNoANoA24. Any other flight procedure and/or configuration<br>described in the user's manual0000Procedure works as describednot available0not available00Procedure suitable for novice pilotsnot available0not available00Cascade occursot available0not available00025. Comments of test pilotot availableot available000   | 23. Alternative means of directional control                                       | А                                       |   |                                   |   |
| 24. Any other flight procedure and/or configuration described in the user's manual   0     Procedure works as described   not available   0   not available   0     Procedure suitable for novice pilots   not available   0   not available   0     Cascade occurs   not available   0   not available   0   0     25. Comments of test pilot   0   not available   0   0  | 180° turn achievable in 20 s   | Yes                                     | Α | Yes                               | А |
| described in the user's manualnot available0not available0Procedure works as describednot available0not available0Procedure suitable for novice pilotsnot available0not available0Cascade occursnot available0not available025. Comments of test pilot000   | Stall or spin occurs   | No                                      | Α | No                                | А |
| Procedure suitable for novice pilots   not available   0   not available   0     Cascade occurs   not available   0   not available   0     25. Comments of test pilot   0   10   10  | 24. Any other flight procedure and/or configuration described in the user's manual | 0                                       |   |                                   |   |
| Cascade occurs not available 0 not available 0   25. Comments of test pilot 0 0 0   | Procedure works as described   | not available                           | 0 | not available                     | 0 |
| 25. Comments of test pilot  | Procedure suitable for novice pilots   | not available                           | 0 | not available                     | 0 |
| •   | Cascade occurs   | not available                           | 0 | not available                     | 0 |
| Comments  | 25. Comments of test pilot   |   |   |                                   |   |
|   | Comments   |   |   |                                   |   |